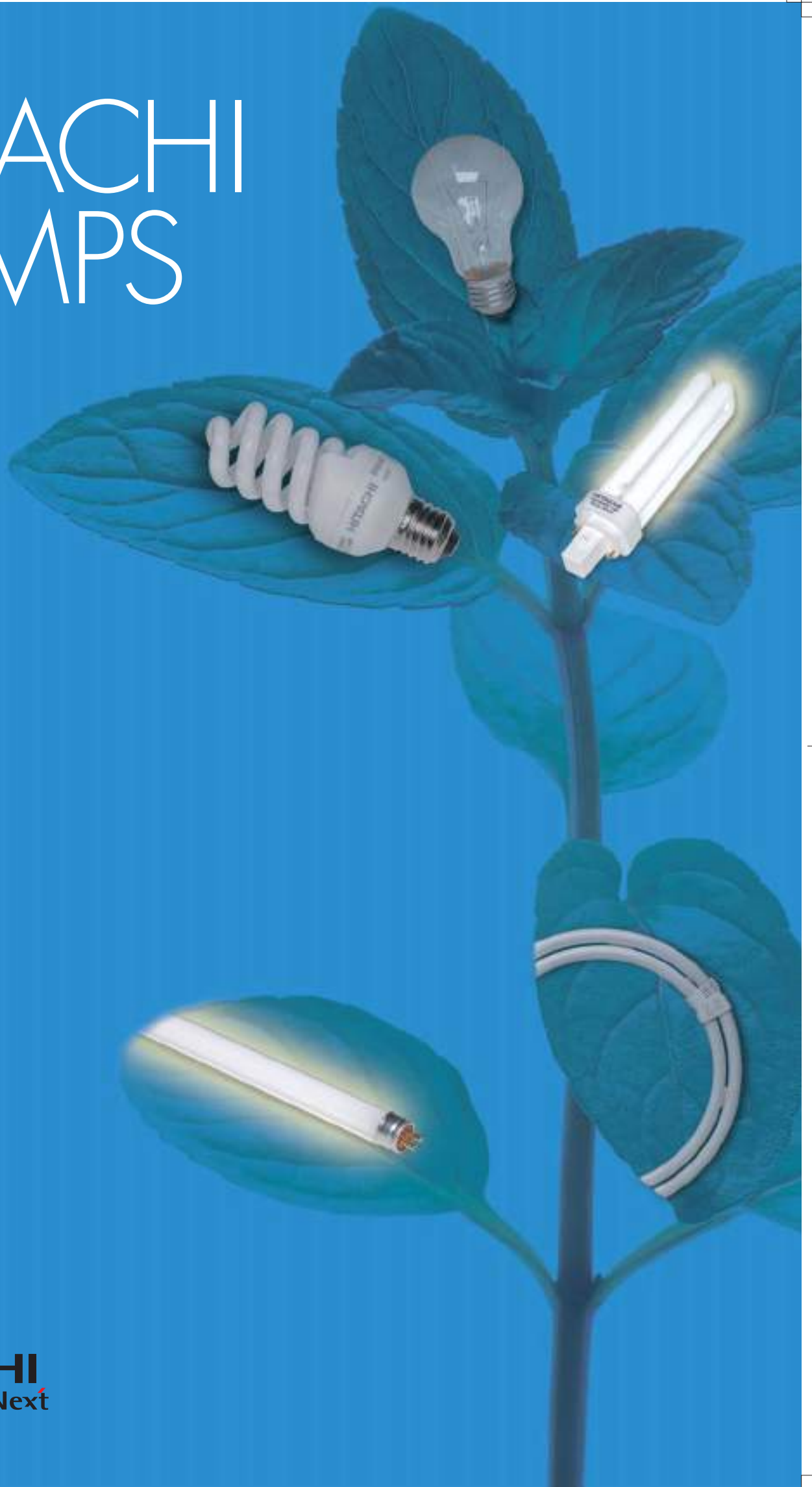


HITACHI LAMPS





HITACHI
Inspire the Next

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Hitachi Lighting Business Profile

Since the inception of the Lighting Division of Hitachi Ltd (Japan) in 1940, Hitachi has been the first to engage in research, design, and manufacturing and sales of fluorescent lamps, domestic as well as worldwide, as a leading exporter.

With the recent development of energy saving fluorescent lamps, Hitachi is well positioned to meet the worldwide demands for energy conserving product lines.

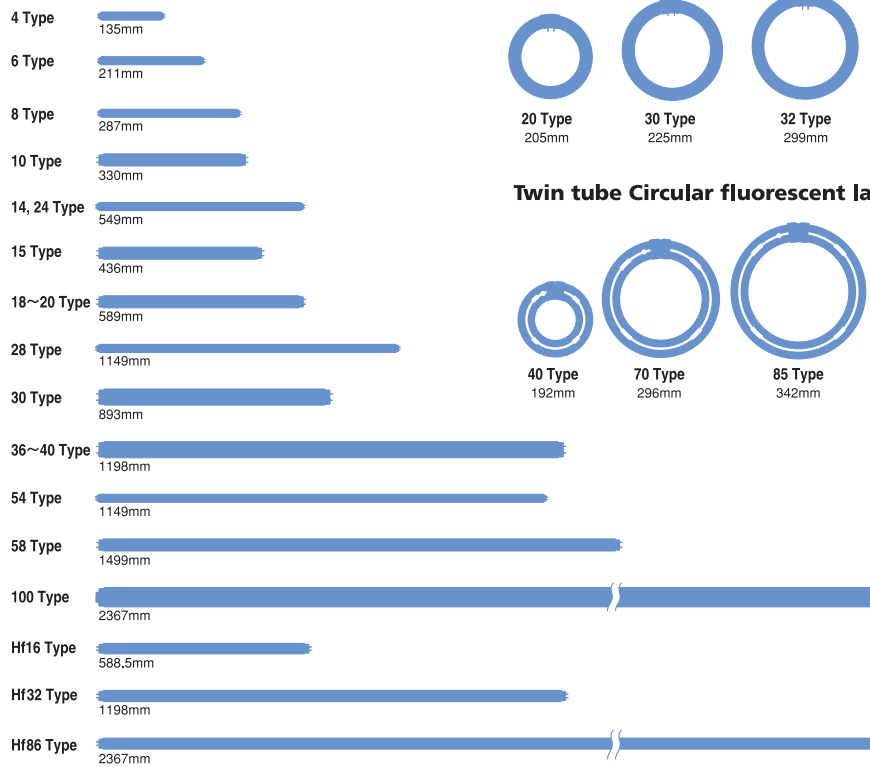
Through its Hitachi worldwide network and technical tie-ups with foreign companies, Hitachi can satisfy the needs of industrial and consumer markets, as well as the new building industry worldwide.

Hitachi lamps come with the total quality assurances in performance, reliability and optimum efficiency, as per their lamp specifications, and they comply with ISO 14001-2004 Certification in environmental management system.

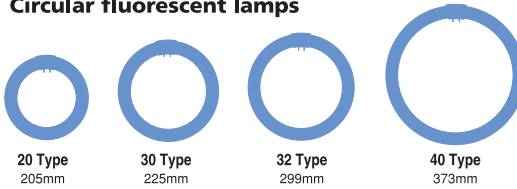


Size and wattage of fluorescent lamps

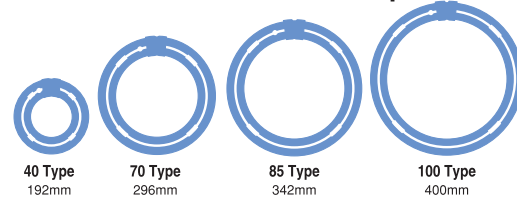
Straight fluorescent lamps



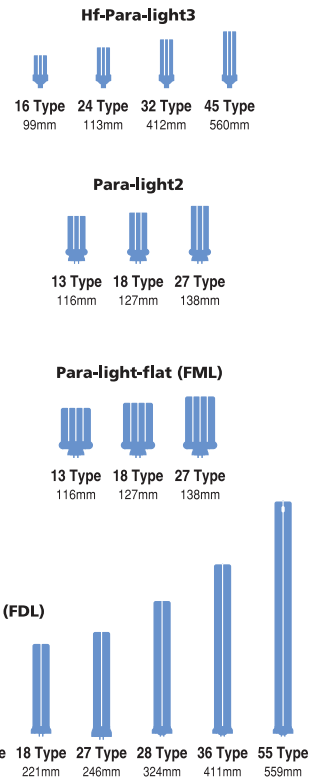
Circular fluorescent lamps



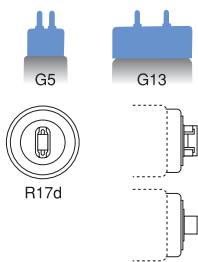
Twin tube Circular fluorescent lamps



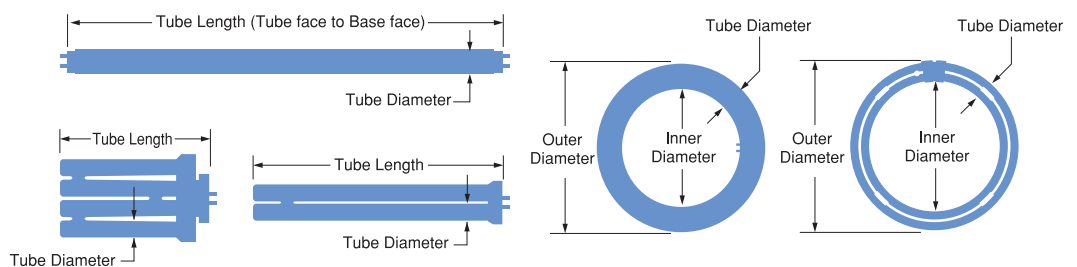
Compact fluorescent lamps



The type of base



Tube Length and Diameter



How to read lamp ID

F 40 T10 / D·RS
① ② ③ ④ ⑤

① Represents a lamp shape

F : Straight fluorescent lamps
FC,FCL : Circular fluorescent lamps (RING LIGHT)
G : Germicidal lamps
FPL : Compact U-shaped fluorescent lamps (PARA • LIGHT)
FDL : Compact U-shaped fluorescent lamps (PARA • LIGHT 2)
FML : Compact U-shaped fluorescent lamps (PARA • LIGHT FLAT)
CFL : Compact Fluorescent Lamp
EFT,EFG : Electronic CF lamp (ELECTRONIC COMPACT BULB)
EFD : Electronic quad lamp
EFH : Electronic triple lamp
FHD : Twin-Tube Circular
EFS : Electronic spiral lamp

② Represents a lamp size and wattage (W)

[STRAIGHT TUBES]

4:4W 6:6W 10:10W 15:15W 20:20W 30:30W 40:40W 96:96W

[CIRCULAR TUBES]

6:6inch 8:8inch 12:12inch 16:16inch 15:15W 20:20W 30:30W 32:32W

[COMPACT TYPE]

9:9W 13:3W 15:15W 17:17W 18:18W 20:20W 27:27W 28:28W
 36:36W 55:55W

③ Represents the diameter of a glass tube

T5:15.5mm **T8**:25.5mm **T9**:28.0mm **T10**:32.0mm **T12**:38.0mm

④ Represents light color and quality

D : Daylight
CW : Cool White
WW : Warm White
W : White
EDK : UV CUT Triphosphor type (7,400K) 874
ENK : UV CUT Triphosphor type (5,500K) 855
ELK : UV CUT Triphosphor type (3,000K) 830
EX-CW : Triphosphor type (4,200K) 842
EX-75 : Triphosphor type (7,500K) 875
EX-D : Triphosphor type (6,700K) 867
EX-N(EX-50) : Triphosphor type (5,000K) 850
EX-41 : Triphosphor type (4,100K) 841
EX-35 : Triphosphor type (3,500K) 835
EX-L : Triphosphor type (3,000K) 830
BR : Aqarium lamp (SUNLINE BEAUTY)
BL : Black light lamp (BL)
BL-B : Black light blue
Y-F : Yellow lamp
EDL : High color rendition AAA class (Natural Daylight)

⑤ Represents starting method and type of special lamp

RS : Rapid start type
NU : Discoloration prevention type
P : Safety type

Lamps and fixtures quick reference table

We can not take full responsibilities for the lamp matching with other maker's fixtures and equipments,because there are many kinds of use conditions and applications in the market. Please choose the correct combination between the lamp and the ballast or fixture.

○ suitable × unsuitable △ May not light on quickly

Fixtures		Lamps	Preheat Type		Rapid Start Type		FHF
			Ordinary Type	Energy Saving Type ¹⁾	Ordinary Type	Energy Saving Type ^{1) 2)}	
Magnetic Ballast	Starter Type		○	○	△	×	×
	Rapid Start Type		×	×	○	○	×
	Rapid Start & Waterproof Type		×	×	○	○	×
	Dimmerble Type		×	×	×	×	×
Electronic Ballast	Electronic Ballast for Preheat Start FL		○	○	×	×	×
	Electronic Ballast for Rapid Start FL		×	×	○	○	×
	High Frequency Type		×	×	×	×	○
	Dimable Type		△ ³⁾	△ ³⁾	△ ³⁾	△ ³⁾	△ ³⁾
	Emergency Type		○	○ (FCL/20w) ×	○	×	×
							○ (Over 40w)

1) The lamps designed for saving energy shall be used only indoors. Burn lamps in specified temperatures below. Lamps more than 40W shall be operated at, Starter Type : 5-40°C Rapid Start Type : 10-40°C

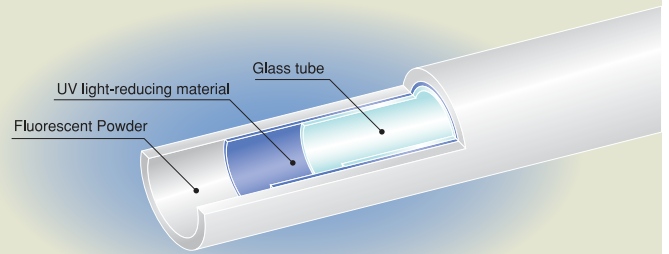
2) Never use the lamps in closed fixtures and equipments,or environment under overvoltage.

3) There are many kinds of applications of the lamp to the lighting fixture or the ballast, please read manual/instructions of the lamps and ballasts or inverters carefully before use. We're not responsible free for any matching problems.

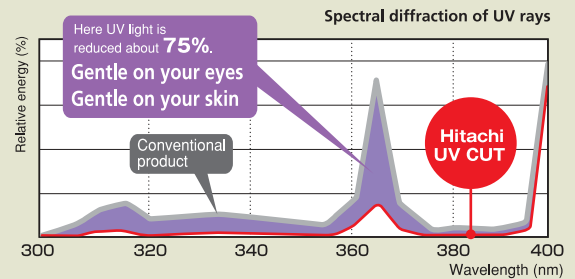
Hitachi UV CUT Lamps

UV rays reduced about 75%.

Hitachi lamps are coated on interior surfaces with a substance that cut UV rays. Light from Hitachi lamps lets you see everything brightly and colorfully but it is also gentle on your eyes and skin. Insects are less likely to swarm Hitachi lamps and light is less apt to cause color fading. Hitachi lamps are one step ahead of the rest, everywhere from homes to public and commercial facilities.



<p>Regular fluorescent lamp</p>	<p>Lamp with UV light reduction function added.</p>	<p>Regular fluorescent lamp</p>	<p>Lamp with UV light reduction function added.</p>
<p>Insects are less likely to approach. Insects can easily see UV light. In comparison to the conventional fluorescent lamp, therefore, insects are much less likely to gather around a Hitachi lamp.</p>		<p>Much less color fading UV light can cause the colors of objects to fade. But because UV light is reduced in Hitachi lamps, the colors on pictures, posters, or clothing inside the room do not fade noticeably.</p>	



※ Photos are just for images.

Color rendering properties and spectral distribution of fluorescent lamps

The light-source color (red-tinged or bluish white color) and color rendering properties (how the colors of an object appears to human eyes) of a fluorescent lamp depend on the phosphor used.

- Hitachi UV CUT lamps (triphosphor type) uses Hitachi UV CUT colors to provide further brightness and brilliance.
- Triphosphor (triphosphor type) emits three main colors of blue, green and red that human beings feel best, in order to improve brightness and color rendering properties.
- The spectral distribution of natural light that is emitted in the entire visible range. AAA type with high color rendering properties is not superior in brightness but has spectral distribution very close to natural light and is used for color evaluation or lighting in art museums.

Natural light



Performance Comparison of Hitachi Fluorescent Lamps

Type		Ordering Code	Color Rendering Index(Ra)	Color Temp(K)	Initial Lumens(lm)
Triphosphor	Hitachi UV CUT L Color	FL20SS · ELK/18-F	84	3000	1550
	Hitachi UV CUT N Color	F40T10/EX-50/RS	84	5500	3450
	Hitachi UV CUT D Color	F40T10/EX-74/RS	84	7400	3240
	Triphosphor L Color	F40T10/EX-30/RS	84	3000	3450
	Triphosphor White Color	F40T10/EX-35/RS	84	3500	3450
	Triphosphor Cool White Color	F40T10/EX-42/RS	84	4200	3450
	Triphosphor N Color	F40T10/EX-50/RS	84	5000	3450
	Triphosphor D Color	F40T10/EX-67/RS	84	6700	3240
Ordinary Type	White Color	FLR40SW/M/36-B	84	4200	3000
	Cool White Color	FLR40S · N/M/36-B	84	5000	2850
	Natural Daylight Color	FLR40SD/M/36-B	84	6500	2610
Color Evaluation Type	Color RenditionAAA Type	FLR40S · N-EDL/M-NU	84	5000	2320
	Color RenditionAA Type	FLR40S · N-SDL/M-G	84	5000	2120
	Color RenditionAA Cool White Color	FLR40S · N-SDL/M-G	84	5000	2120
	Color RenditionAA Natural Daylight Color	FLR40S · D-SDL/M-G	84	6500	2020

<p>Triphosphor Incandescent Light Color (EX-L) 830</p>	<p>Hitachi UV CUT L Color (ELK) 830</p>	<p>Triphosphor Warm White Color (EX-WW) 835</p>	<p>Triphosphor Cool White Color (EX-CW) 842</p>	<p>Triphosphor N Color (EX-N) 850</p>	<p>Hitachi UV CUT N Color (ENK) 855</p>
<p>Triphosphor D Color (EX-D) 867</p>	<p>Hitachi UV CUT D Color (EDK) 874</p>	<p>Color RenditionAAA Cool White Color (N-EDL)</p>	<p>Natural Daylight Color (N)</p>	<p>Cool White Color (CW)</p>	<p>Daylight (D)</p>

Triphosphor fluorescent lamp (Hitachi UV CUT)

New Hitachi UV CUT lineup, including L (Incandescent Light Color 830), N (Natural Daylight Color 855) and D (Cool Daylight Color 874), provides further brightness and brilliance.

Triphosphor fluorescent lamp (Hitachi UV CUT) series

Development of a new fluorescent Powder contributes to the birth of further bright, more brilliant fluorescent lamps.

With UV cutting function

Use of a UV cutting material eliminates about 75% of ultraviolet ray to prevent insects from swarming to fluorescent lamps as well as to avoid color fading of objects.

- You can have your choice of Hitachi UV CUT according to your room or shop image, or your requirements: L (Incandescent Light Color), N (Natural Daylight Color) and D (daylight type).



ELK

Hitachi UV CUT L color (Incandescent light color) 830
(Color temperature of 3,000 K)

Incandescent light color of this type shows an image of sunlight after a drawn or before a sunset, creating a comfortable atmosphere and a relaxed space with warm light similar to incandescent light.



ENK

Hitachi UV CUT N color (Natural Daylight color) 855
(Color temperature of 5,500 K)

This light provides breezy brightness, expressing various colors beautifully and naturally. Also, it provides tantalizing colors of food as well as emphasizes the healthy color of human skin.



EDK

Hitachi UV CUT D color (Cool Daylight color) 874
(Color temperature of 7,400 K)

This light provides a clear atmosphere that reminds a clear blue sky, emphasizing white color more vividly and thus allowing people read newspapers easily and clearly.

※The following photo expresses an image and is different from an actual view.

Triphosphor fluorescent lamp (Triphosphor)

This fluorescent lamp series is excellent in brightness and brilliance.

Triphosphor fluorescent lamp (Triphosphor) series

Triphosphor fluorescent lamps, excellent in brightness and brilliance, concentrate on the red, green and blue wavelength bands where human eyes feel light most. Also, it implements a natural object look.

Much brighter!

<Triphosphor N> is brighter than the cool white type (W) by approx. 32% and <Triphosphor D> increase in brightness about 45% more than the daylight type (D). (Hitachi FCL30 type's total luminous flux ratio)

More brilliant!

Average color rendering index of Ra 84 provides various natural colors in your life.

- You can have your choice of Triphosphor according to your room or shop image, or your requirements: L (Incandescent Light Color), N (Natural Daylight Color) and D (Daylight Color). (Part of warm white color type is available for business use.)



EXL

Triphosphor Incandescent light color (Incandescent Light Color)830
(Color temperature of 3,000 K)

Incandescent light color of this type shows an image after a drawn or before a sunset, creating a comfortable atmosphere and a relaxed space with warm light similar to incandescent light. Also, it looks warm and eye-friendly.



EXN

Triphosphor N color (Natural Daylight Color)850
(Color temperature of 5,000 K)

Light color of this type shows an image of sunlight in the morning or at about 3 p.m. It makes people feel natural outdoor brightness and provides a natural space as well as a clear view of objects, such as shiny skin or face.



EXD

Triphosphor D color (Daylight Color)867
(Color temperature of 6,700 K)

Light color of this type looks like noonday sunlight in the clear sky. White clear light can make people feel nice and cool, offering an open, urban space.

※The following photo expresses an image and is different from an actual view.

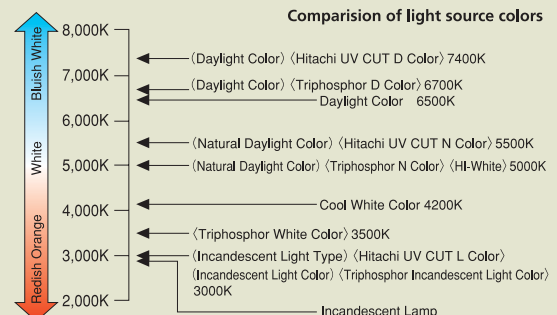
EX-WW Triphosphor White Color

(Color temperature of 3,500 K)

Triphosphor white color is positioned between Triphosphor N and incandescent light type, which is a little bit close to incandescent light, providing a warm, gentle and bright atmosphere.

Performance of "Hitachi UV CUT" & "Triphosphor"

Type	STRAIGHT TUBES40W Type			CIRCULAR TUBES30Type28W		
	Initial Lims (lm)	Color Rendering Index (Ra)	Color Temp (K)	Initial Lims (lm)	Color Rendering Index (Ra)	Color Temp (K)
Hitachi UV CUT L Color (Incandescent Light Color)	—	—	—	2210	84	3000
Hitachi UV CUT N Color (Natural Daylight Color)	3560	84	5500	2210	84	5500
Hitachi UV CUT D Color (Cool Daylight Color)	3350	84	7400	2100	84	7400
Triphosphor Incandescent Light Color	3450	84	3000	—	—	—
Triphosphor N Color (Natural Daylight Color)	3450	84	5000	—	—	—
Triphosphor D Color (Daylight Color)	3240	84	6700	—	—	—
Triphosphor White Color	3450	84	3500	—	—	—
Cool White Color	3000	61	4200	1670	61	4200
Daylight Color	2610	74	6500	1450	74	6500



Triphosphor

Hitachi New Long Life HO and HE Super Slim T5 Fluorescent Lamps

(T5 High Frequency) 15.5mm diameter 54,28,24,14,13w TRIPHOSPHOR UV CUT

Hitachi's New Japanese made environmentally friendly T5 straight tubes.

STRAIGHT TUBES

<Suitable for>

- Offices ●Retail Shops ●Schools ●Factories ●Hospitals

<Low emission>

HO and HE Super Slim T5 Fluorescent Lamps are an impressive upgrade from standard T5 tubes, producing high quality triphosphor light and increasing lamp life. Boosting the highest energy efficiency for fluorescent lighting and resulting in the lowest CO2 emissions (50 % less than F40 series), T5 HE is a popular business choice.

<Long Life> Average rated lamp life of over 25,000 hours.

<Low Maintenance costs> Long life minimizes maintenance costs.

<Low Mercury>

An improved phosphor coating technology reduces mercury absorption by about 50% (compared to F40 series), which is one of the main causes of lamp lumen depreciation, leading to a higher lumen maintenance value.

<NANO technology>

The NANO optical coating technology provides ideal diffusive and reflective surface to capture light rays from any light source including fluorescent lamps to enhance illumination by 70% to 100% on average, both for retrofits and new fixtures, enabling the reduction of the number of fixtures.

- Less UV rays – 75% less than standard fluorescent lamps
- Less insect swarm around this lamp than around standard fluorescent lamps.
- Less color damage on pictures, objects...
- Gentle on the eyes
- Gentle on the skin



NEW

Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Color Type	Initial Lumens (lm)	Dimensions				Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)	
							Length		Bulb Type	Tube Diameter (mm)					Base
							In	mm							
Triphosphor	F14T5/865 HE UV CUT	14	EX-D-V	6,500	865	1,280 [※]	22	549	T5	15.5	G5	0.170	84 [※]	24,000 [※]	40
	F14T5/850 HE UV CUT	14	EX-N-V	5,000	850	1,300 [※]	22	549	T5	15.5	G5	0.170	84 [※]	24,000 [※]	40
	F14T5/842 HE UV CUT	14	EX-CW-V	4,200	842	1,350 [※]	22	549	T5	15.5	G5	0.170	84 [※]	24,000 [※]	40
	F14T5/830 HE UV CUT	14	EX-L-V	3,000	830	1,350 [※]	22	549	T5	15.5	G5	0.170	84 [※]	24,000 [※]	40
	F24T5/865 HO UV CUT	24	EX-D-V	6,500	865	1,900 [※]	22	549	T5	15.5	G5	0.295	84 [※]	24,000 [※]	40
	F24T5/850 HO UV CUT	24	EX-N-V	5,000	850	1,940 [※]	22	549	T5	15.5	G5	0.295	84 [※]	24,000 [※]	40
	F24T5/842 HO UV CUT	24	EX-CW-V	4,200	842	2,000 [※]	22	549	T5	15.5	G5	0.295	84 [※]	24,000 [※]	40
	F24T5/830 HO UV CUT	24	EX-L-V	3,000	830	2,000 [※]	22	549	T5	15.5	G5	0.295	84 [※]	24,000 [※]	40
	F28T5/865 HE UV CUT	28	EX-D-V	6,500	865	2,700 [※]	46	1,148	T5	15.5	G5	0.170	84 [※]	24,000 [※]	40
	F28T5/850 HE UV CUT	28	EX-N-V	5,000	850	2,800 [※]	46	1,148	T5	15.5	G5	0.170	84 [※]	24,000 [※]	40
	F28T5/842 HE UV CUT	28	EX-CW-V	4,200	842	2,900 [※]	46	1,148	T5	15.5	G5	0.170	84 [※]	24,000 [※]	40
	F28T5/830 HE UV CUT	28	EX-L-V	3,000	830	2,900 [※]	46	1,148	T5	15.5	G5	0.170	84 [※]	24,000 [※]	40
	F54T5/865 HO UV CUT	54	EX-D-V	6,500	865	4,750 [※]	46	1,148	T5	15.5	G5	0.455	84 [※]	24,000 [※]	40
	F54T5/850 HO UV CUT	54	EX-N-V	5,000	850	4,850 [※]	46	1,148	T5	15.5	G5	0.455	84 [※]	24,000 [※]	40
	F54T5/842 HO UV CUT	54	EX-CW-V	4,200	842	5,000 [※]	46	1,148	T5	15.5	G5	0.455	84 [※]	24,000 [※]	40
F54T5/830 HO UV CUT	54	EX-L-V	3,000	830	5,000 [※]	46	1,148	T5	15.5	G5	0.455	84 [※]	24,000 [※]	40	
Preheat Start Type	F4T5/EX-CW	4	EX-CW	4,200	842	150	6	135	T5	15.5	G5	0.170	84	8,000	50
	F4T5/EX-L	4	EX-L	3,000	830	150	6	135	T5	15.5	G5	0.170	84	8,000	50
	F6T5/EX-D	6	EX-D	6,700	867	270	9	211	T5	15.5	G5	0.160	84	10,000	50
	F6T5/EX-CW	6	EX-CW	4,200	842	320	9	211	T5	15.5	G5	0.160	84	10,000	50
	F6T5/EX-L	6	EX-L	3,000	830	320	9	211	T5	15.5	G5	0.160	84	10,000	50
	F8T5/EX-N	8	EX-N	5,000	850	450	12	287	T5	15.5	G5	0.145	84	10,000	50
	F8T5/EX-CW	8	EX-CW	4,200	842	450	12	287	T5	15.5	G5	0.145	84	10,000	50
	F8T5/EX-L	8	EX-L	3,000	830	450	12	287	T5	15.5	G5	0.145	84	10,000	50

※ F14T5 ~ F54T5 : The values are under consideration. It is not a final decision value.

Straight Tubes

Select out of a variety of straight fluorescent lamps up to your purpose.

STRAIGHT TUBES

<Special Feature>

●The diameter of the energy saving type lamps is 26 or 28 mm so that they are cheaper to transport and require smaller storage space.

<Applications>

- Stores ●Offices ●Factories ●Lanterns
- Emergency Lights ●Stations



Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Color Type	Initial Lumens (lm)	Dimensions				Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std. Pkg Qty (inner)	
							Length		Bulb Type	Tube Diameter (mm)					Base
							In	mm							
Triphosphor															
Preheat Start Type	F13T5/865 UV CUT	13	EX-D-V	6,500	865	900 [※]	20	517	T5	15.5	G5	0.170	84	10,000 [※]	40
	F13T5/850 UV CUT	13	EX-N-V	5,000	850	1,000 [※]	20	517	T5	15.5	G5	0.170	84	10,000 [※]	40
	F13T5/842 UV CUT	13	EX-CW-V	4,200	842	1,000 [※]	20	517	T5	15.5	G5	0.170	84	10,000 [※]	40
	F13T5/830 UV CUT	13	EX-L-V	3,000	830	1,000 [※]	20	517	T5	15.5	G5	0.170	84	10,000 [※]	40
	F10T8EX-D	10	EX-D	6,700	867	520	13	330	T8	25.5	G13	0.230	84	6,000	25
	F10T8EX-N	10	EX-N	5,000	850	555	13	330	T8	25.5	G13	0.230	84	6,000	25
	F15T8EX-D	15	EX-D	6,700	867	910	18	436	T8	25.5	G13	0.300	84	6,000	25
	F15T8EX-N	15	EX-N	5,000	850	970	18	436	T8	25.5	G13	0.300	84	6,000	25
	F58T8/EX-D	58	EX-D	6,700	867	4,360	59	1,499	T8	25.5	G13	0.670	84	12,000	25
	F58T8/EX-N	58	EX-N	5,000	850	5,000	59	1,499	T8	25.5	G13	0.670	84	12,000	25
High Frequency Ballast	FHF16/EX-D-H	16/23	EX-D	6,700	867	1,390/1,980	24	588.5	T8	25.5	G13	0.255/0.425	84	8,500	25
	FHF16/EX-N-H	16/23	EX-N	5,000	850	1,470/2,100	24	588.5	T8	25.5	G13	0.255/0.425	84	8,500	25
	FHF16/EX-CW-H	16/23	EX-CW	4,200	842	1,470/2,100	24	588.5	T8	25.5	G13	0.255/0.425	84	8,500	25
	FHF16/EX-W-H	16/23	EX-W	3,500	835	1,470/2,100	24	588.5	T8	25.5	G13	0.255/0.425	84	8,500	25
	FHF16/EX-L-H	16/23	EX-L	3,000	830	1,470/2,100	24	588.5	T8	25.5	G13	0.255/0.425	84	8,500	25
	FHF32/EX-D-H	32/45	EX-D	6,700	867	3,310/4,650	48	1,198	T8	25.5	G13	0.255/0.425	84	12,000	25
	FHF32/EX-N-H	32/45	EX-N	5,000	850	3,520/4,950	48	1,198	T8	25.5	G13	0.255/0.425	84	12,000	25
	FHF32/EX-CW-H	32/45	EX-CW	4,200	842	3,520/4,950	48	1,198	T8	25.5	G13	0.255/0.425	84	12,000	25
	FHF32/EX-W-H	32/45	EX-W	3,500	835	3,520/4,950	48	1,198	T8	25.5	G13	0.255/0.425	84	12,000	25
	FHF32/EX-L-H	32/45	EX-L	3,000	830	3,520/4,950	48	1,198	T8	25.5	G13	0.255/0.425	84	12,000	25
	FHF86/EX-D	84	EX-D	6,700	867	8,650	94	2,367	T8	25.5	R17d	0.395	84	12,000	10
	FHF86/EX-N	84	EX-N	5,000	850	9,200	94	2,367	T8	25.5	R17d	0.395	84	12,000	10
	FHF86/EX-CW	84	EX-CW	4,200	842	9,200	94	2,367	T8	25.5	R17d	0.395	84	12,000	10
	FHF86/EX-W	84	EX-W	3,500	835	9,200	94	2,367	T8	25.5	R17d	0.395	84	12,000	10
	FHF86/EX-L	84	EX-L	3,000	830	9,200	94	2,367	T8	25.5	R17d	0.395	84	12,000	10
Preheat Start Type	FL20SS/EDK	18	EDK	7,400	874	1,450	24	580	T9	28	G13	0.340	84	8,500	25
	FL20SS/ENK	18	EX-N-V	5,500	850	1,550	24	580	T9	28	G13	0.340	84	8,500	25
	FL20SS/ELK	18	EX-L-V	3,000	830	1,550	24	580	T9	28	G13	0.340	84	8,500	25

※ F13T5 : The values are under consideration. It is not a final decision value.

Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Color Type	Initial Lumens (lm)	Dimensions					Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)
							Length		Bulb Type	Tube Diameter (mm)	Base				
							In	mm							
Tripbospor															
Preheat Start Type	F20T9 EX-D	18	EX-D	6,700	867	1,350	24	589	T9	28	G13	0.360	84	8,500	25
	F20T9 EX-N	18	EX-N	5,000	850	1,470	24	589	T9	28	G13	0.360	84	8,500	25
	F20T9EX-L	18	EX-L	3,000	830	1,470	24	589	T9	28	G13	0.360	84	8,500	25
	F30T9/EX-D	30	EX-D	6,700	867	2,350	36	893	T9	28	G13	0.370	84	8,500	25
	F30T9 EX-N	30	EX-N	5,000	850	2,500	36	893	T9	28	G13	0.370	84	8,500	25
	F30T9/EX-L	30	EX-L	3,000	830	2,500	36	893	T9	28	G13	0.370	84	8,500	25
	FL40SS/EDK	37	EX-D-V	7,400	874	3,350	48	1,198	T9	28	G13	0.410	84	12,000	25
	FL40SS/ENK	37	EX-N-V	5,500	850	3,560	48	1,198	T9	28	G13	0.410	84	12,000	25
	FL40SS/ELK	37	EX-L-V	3,000	830	3,560	48	1,198	T9	28	G13	0.410	84	12,000	25
	F40T9/EX-D	37	EX-D	6,700	867	3,350	48	1,198	T9	28	G13	0.420	84	12,000	25
	F40T9 EX-N	37	EX-N	5,000	850	3,560	48	1,198	T9	28	G13	0.420	84	12,000	25
	F40T9 EX-CW	37	EX-CW	4,200	842	3,560	48	1,198	T9	28	G13	0.420	84	12,000	25
F40T9/EX-L	37	EX-L	3,000	830	3,560	48	1,198	T9	28	G13	0.420	84	12,000	25	
Rapid Start Type (No Starter Used)	F40T10/EX-50/RS	40	EX-N	5,000	850	3,450	48	1,198	T10	32	G13	0.420	84	12,000	25
	F40T10/EX-41/RS	40	EX-CW	4,200	842	3,450	48	1,198	T10	32	G13	0.420	84	12,000	25
	F40T10/EX-35/RS	40	EX-W	3,500	835	3,450	48	1,198	T10	32	G13	0.420	84	12,000	25
	FLR110H-EX-D/A	110	EX-D	6,700	867	9,200	96	2,367	T12	38	R17d	0.800	84	12,000	10
Halophosphor															
Preheat Start Type	F4T5/D	4	Daylight	6,500	—	120	6	135	T5	15.5	G5	0.170	74	8,000	50
	F4T5/CW	4	Cool White	4,200	—	135	6	135	T5	15.5	G5	0.170	61	8,000	50
	F4T5/W	4	White	3,500	—	135	6	135	T5	15.5	G5	0.170	60	8,000	50
	F4T5/WW	4	Warm White	3,000	—	135	6	135	T5	15.5	G5	0.170	53	8,000	50
	F6T5/D	6	Daylight	6,500	—	250	9	211	T5	15.5	G5	0.160	74	10,000	50
	F6T5/CW	6	Cool White	4,200	—	300	9	211	T5	15.5	G5	0.160	61	10,000	50
	F6T5/W	6	White	3,500	—	300	9	211	T5	15.5	G5	0.160	60	10,000	50
	F6T5/WW	6	Warm White	3,000	—	300	9	211	T5	15.5	G5	0.160	53	10,000	50
	F8T5/D	8	Daylight	6,500	—	330	12	287	T5	15.5	G5	0.145	74	10,000	50
	F8T5/CW	8	Cool White	4,200	—	400	12	287	T5	15.5	G5	0.145	61	10,000	50
	F8T5/W	8	White	3,500	—	400	12	287	T5	15.5	G5	0.145	60	10,000	50
	F8T5/WW	8	Warm White	3,000	—	400	12	287	T5	15.5	G5	0.145	53	10,000	50
	F13T5/D*	13	Daylight	6,500	—	720	21	523	T5	15.5	G5	0.165	74	10,000	50
	F13T5/W*	13	White	3,500	—	820	21	523	T5	15.5	G5	0.165	61	10,000	50
	F13T5/CW*	13	Cool White	4,200	—	820	21	523	T5	15.5	G5	0.165	60	10,000	50
	F13T5/WW*	13	Warm White	3,000	—	820	21	523	T5	15.5	G5	0.165	53	10,000	50
	F10T8/D	10	Daylight	6,500	—	420	13	330	T8	25.5	G13	0.230	74	6,000	25
	F10T8/CW	10	Cool White	4,200	—	490	13	330	T8	25.5	G13	0.230	61	6,000	25
	F10T8/WW	10	Warm White	3,000	—	490	13	330	T8	25.5	G13	0.230	53	6,000	25
	F15T8/D	15	Daylight	6,500	—	770	18	436	T8	25.5	G13	0.300	74	6,000	25
	F15T8/CW	15	Cool White	4,200	—	860	18	436	T8	25.5	G13	0.300	61	6,000	25
	F15T8/WW	15	Warm White	3,000	—	860	18	436	T8	25.5	G13	0.300	53	6,000	25
	F20T8/D	18	Daylight	6,500	—	1,050	24	589	T8	25.5	G13	0.370	74	8,500	25
	F20T8/CW	18	Cool White	4,200	—	1,225	24	589	T8	25.5	G13	0.370	61	8,500	25
	F20T8/WW	18	Warm White	3,000	—	1,225	24	589	T8	25.5	G13	0.370	53	8,500	25
	F30T8/D	28	Daylight	6,500	—	1,800	36	893	T8	25.5	G13	0.390	74	8,500	25
	F30T8/CW	28	Cool White	4,200	—	2,200	36	893	T8	25.5	G13	0.390	61	8,500	25
	F30T8/WW	28	Warm White	3,000	—	2,200	36	893	T8	25.5	G13	0.390	53	8,500	25
	F40T8/D	36	Daylight	6,500	—	2,550	48	1,198	T8	25.5	G13	0.430	74	12,000	25
	F40T8/CW	36	Cool White	4,200	—	3,000	48	1,198	T8	25.5	G13	0.430	61	12,000	25
	F40T8/WW	36	Warm White	3,000	—	3,000	48	1,198	T8	25.5	G13	0.430	53	12,000	25

* F13T5 : The values are under consideration. It is not a final decision value.

Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)		Initial Lumens (lm)	Dimensions					Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)
							Length		Bulb Type	Tube Diameter (mm)	Base				
							In	mm							
Halophosphor															
Preheat Start Type	F20T9/D	18	Daylight	6,500	—	1,070	24	589	T9	28	G13	0.360	74	8,500	25
	F20T9/CW	18	Cool White	4,200	—	1,230	24	589	T9	28	G13	0.360	61	8,500	25
	F20T9/WW	18	Warm White	3,000	—	1,230	24	589	T9	28	G13	0.360	53	8,500	25
	F30T9/D	30	Daylight	6,500	—	1,900	36	893	T9	28	G13	0.370	74	8,500	25
	F30T9/CW	30	Cool White	4,200	—	2,200	36	893	T9	28	G13	0.370	61	8,500	25
	F30T9/WW	30	Warm White	3,000	—	2,200	36	893	T9	28	G13	0.370	53	8,500	25
	F40T9/D	37	Daylight	6,500	—	2,700	48	1,198	T9	28	G13	0.420	74	12,000	25
	F40T9/CW	37	Cool White	4,200	—	3,100	48	1,198	T9	28	G13	0.420	61	12,000	25
	F40T9/WW	37	Warm White	3,000	—	3,100	48	1,198	T9	28	G13	0.420	53	12,000	25
	FL20SD	20	Daylight	6,500	—	1,070	24	580	T10	32	G13	0.360	74	8,500	25
	FL20SW	20	Cool White	4,200	—	1,230	24	580	T10	32	G13	0.360	61	8,500	25
	F20T10/D	20	Daylight	6,500	—	1,070	24	589	T10	32	G13	0.360	74	8,500	25
	F20T10/CW	20	Cool White	4,200	—	1,230	24	589	T10	32	G13	0.360	61	8,500	25
	F20T10/WW	20	Warm White	3,000	—	1,230	24	589	T10	32	G13	0.360	53	8,500	25
	F40T10/D	40	Daylight	6,500	—	2,700	48	1,198	T10	32	G13	0.420	74	12,000	25
	F40T10/CW	40	Cool White	4,200	—	3,100	48	1,198	T10	32	G13	0.420	61	12,000	25
	F40T10/WW	40	Warm White	3,000	—	3,100	48	1,198	T10	32	G13	0.420	53	12,000	25
	Rapid Start Type (No Starter Used)	F20T10/D/RS	20	Daylight	6,500	—	1,030	24	589	T10	32	G13	0.360	74	8,500
F20T10/CW/RS		20	Cool White	4,200	—	1,190	24	589	T10	32	G13	0.360	61	8,500	25
F40T10/D/RS		40	Daylight	6,500	—	2,610	48	1,198	T10	32	G13	0.420	74	12,000	25
F40T10/CW/RS		40	Cool White	4,200	—	3,000	48	1,198	T10	32	G13	0.420	61	12,000	25
FLR110HD/A/100		100	Daylight	6,500	—	7,800	96	2,367	T12	38	R17d	0.820	74	12,000	10
FLR110HW/A/100		100	Cool White	4,200	—	8,980	96	2,367	T12	38	R17d	0.820	61	12,000	10

T6 Fluorescent Lamps (Twin Tube Circular)



Bright, Compact and Long life Circular Twin Tube.

Bridging Technology

In order to make a fluorescent lamp brighter, the fluorescent tube must be made longer, which in turn makes the overall size of a circular lamp bigger in diameter. Hitachi's new bridging technology makes it possible to combine two fluorescent tubes smaller in diameter together with a vacuum bridge, resulting in a more compact circular lamp yet generating similar brightness of a conventional single tube circular lamp with the same wattage as illustrated below.



Electronic adapter (Self-Ballasted Twin-Tube Circular)

It is not necessary to develop a lighting fixture. It can be screwed into ordinary incandescent sockets.

- Life of the lamp is 9 times longer than ordinary incandescent bulbs. (Compared with our lamps)
- Adapter's life is 27 times longer.



FHD40EX-D

BRIGHTER!

- While a combination of three conventional tri-phosphor circular tubes (30W, 32W, and 40W type) producing 7,430 lm with a total wattage of 96 watts, one 100W type Twin-Tube circular lamp emits 8,200 lm at 97 watts, which is almost 10% brighter.

MORE COMPACT IN SIZE!

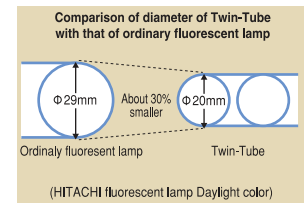
- Almost the same brightness but the outside diameter is just one half.

Ordinary fluorescent lamp 40W type	Twin-Tube Circular 40W type
Outside diameter 406 mm, total luminous flux 3,240 lm	Outside diameter 192 mm, total luminous flux 2,900 lm

- The outside diameter is almost equal but it is about 2.7 times brighter.

Ordinary fluorescent lamp 40W type	Twin-Tube Circular 100W type
Outside diameter 406 mm, total luminous flux 3,240 lm	Outside diameter 400 mm, total luminous flux 8,200 lm

- The Twin-Tube diameter is about 30% smaller than that of the ordinary one.



Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Initial Lumens (lm)	Dimensions (mm)			Lamp Current (A)	Average Life (hours)	
						Outer Dia	Tube Dia	Base			
Triphosphor											
40	FHD40EX-D	41	EX-D	7,200	872	2,900	192/106	20	GU10q	0.430	10,000
	FHD40EX-CW	41	EX-CW	4,100	841	2,900	192/106	20	GU10q	0.430	10,000
	FHD40EX-WW	41	EX-W	2,850	830	3,100	192/106	20	GU10q	0.430	10,000
70	FHD70ED K-A	68	EDK	7,400	874	5,500	296/210	20	GU10q	0.430	15,000
	FHD70EN K-A	68	ENK	5,500	855	5,900	296/210	20	GU10q	0.430	15,000
	FHD70EL K-A	68	ELK	3,000	830	5,900	296/210	20	GU10q	0.430	15,000
85	FHD85ED K-A	85	EDK	7,400	874	7,100	342/256	20	GU10q	0.430	15,000
	FHD85EN K-A	85	ENK	5,500	855	7,600	342/256	20	GU10q	0.430	15,000
	FHD85EL K-A	85	ELK	3,000	830	7,600	342/256	20	GU10q	0.430	15,000
100	FHD100ED K-A	97	EDK	7,400	874	8,200	400/314	20	GU10q	0.430	15,000
	FHD100EN K-A	97	ENK	5,500	855	8,800	400/314	20	GU10q	0.430	15,000
	FHD100EL K-A	97	ELK	3,000	830	8,800	400/314	20	GU10q	0.430	15,000

- If the ambient temperature is low, the lamp may flicker and take some time to reach full brightness.
- Use with a specially applicable ballast only.
- Total luminous flux is the value at the ambient temperature of 25°C.
- These specifications are subject to change for improvement without notice.

T9 Fluorescent Lamps (Circular)

The most popular lamps for ordinary households.



<Special Feature>

- The most popular lamps for ordinary household lighting.

<Applications>

- Stores ● Ordinary households ● Table lamps ● Floor stands



Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Initial Lumens (lm)	Dimensions					Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std. Pkg Qty (inner)	
						Length		Bulb Type	Tube Diameter (mm)	Base					
						In	mm								
Triphosphor															
Preheat Start Type	FC6T9/EX-N	20	EX-N	5,000	850	1,000	6 1/2	165	T9	29	G10q	0.410	84	9,000	24
	FC6T9/EX-L	20	EX-L	3,000	830	1,000	8 1/4	165	T9	29	G10q	0.410	84	9,000	24
	FC8T9/EX-D	22	EX-D	6,700	867	1,360	8 1/4	210	T9	29	G10q	0.370	84	9,000	24
	FC8T9/EX-N	22	EX-N	5,000	850	1,450	8 1/4	210	T9	29	G10q	0.370	84	9,000	24
	FC8T9/EX-L	22	EX-L	3,000	830	1,450	9	210	T9	29	G10q	0.370	84	9,000	24
	FCL30/EDK	28	EDK	7,400	874	2,100	9	226	T9	31/27	G10q	0.600	84	9,000	20
	FCL30/ENK	28	ENK	5,500	855	2,210	9	226	T9	31/27	G10q	0.600	84	9,000	20
	FCL30/ELK	28	ELK	3,000	830	2,210	12	226	T9	31/27	G10q	0.600	84	9,000	20
	FCL32/EDK	30	EDK	7,400	874	2,480	12	304	T9	31/27	G10q	0.425	84	9,000	10
	FCL32/ENK	30	ENK	5,500	855	2,640	16	304	T9	31/27	G10q	0.425	84	9,000	10
	FCL32/ELK	30	ELK	3,000	830	2,640	16	304	T9	31/27	G10q	0.425	84	9,000	10
	FC12T9/EX-N/F	32	EX-N	5,000	850	2,640	16	304	T9	31/27	G10q	0.430	84	9,000	10
	FC12T9/EX-L/F	32	EX-L	3,000	830	2,640	6 1/2	304	T9	31/27	G10q	0.430	84	9,000	10
	FC16T10/EDK	40	EDK	7,400	874	3,230	6 1/2	406	T9	29	G10q	0.415	84	9,000	12
	FC16T10/EX-N	40	EX-N	5,000	850	3,440	8 1/2	406	T9	29	G10q	0.415	84	9,000	12
FC16T10/EX-L	40	EX-L	3,000	830	3,440	8 1/2	406	T9	29	G10q	0.415	84	9,000	12	
Rapid Start Type (No Starter Used)															
	FC6T9/EX-L · RS	20	EX-L	3,000	830	1,000	8 1/2	165	T9	29	G10q	0.410	84	9,000	24
	FC8T9/EX-L · RS	22	EX-L	3,000	830	1,450	8 1/2	210	T9	29	G10q	0.370	84	9,000	24
Halophosphor															
Preheat Start Type (Starter Used)	FC6T9/D	20	Daylight	6,500	-	800	6 1/2	165	T9	29	G10q	0.380	74	9,000	24
	FC6T9/CW	20	Cool White	4,200	-	900	6 1/2	165	T9	29	G10q	0.380	61	9,000	24
	FCL20D/18	20	Daylight	6,500	-	1,010	8 1/8	206	T9	29	G10q	0.365	74	9,000	24
	FC8T9/D	22	Daylight	6,500	-	1,150	8 1/4	210	T9	29	G10q	0.370	74	9,000	24
	FC8T9/CW	22	Cool White	4,200	-	1,300	8 1/4	210	T9	29	G10q	0.370	61	9,000	24
	FC8T9/WW	22	Warm White	3,000	-	1,300	8 1/4	210	T9	29	G10q	0.370	53	9,000	12
	FCL30D/28	30	Daylight	6,500	-	1,450	8 1/8	224	T9	29	G10q	0.600	74	9,000	20
	FC12T9/D	32	Daylight	6,500	-	1,800	12	304	T9	29	G10q	0.430	74	9,000	24
	FC12T9/CW	32	Cool White	4,200	-	2,000	12	304	T9	29	G10q	0.430	61	9,000	24
	FC12T9/WW	32	Warm White	3,000	-	2,000	12	304	T9	29	G10q	0.430	53	9,000	12
	FC16T10/D	40	Daylight	6,500	-	2,410	16	406	T9	29	G10q	0.420	74	9,000	12
	FC16T10/CW	40	Cool White	3,000	-	2,740	16	406	T9	29	G10q	0.420	61	9,000	12
FC16T10/WW	40	Warm White	3,000	-	2,800	16	406	T9	29	G10q	0.420	53	9,000	12	
Rapid Start Type (No Starter Used)	FC6T9/D · RS	20	Daylight	6,500	-	800	6 1/2	165	T9	29	G10q	0.380	74	9,000	12
	FC6T9/CW · RS	20	Cool White	4,200	-	900	6 1/2	165	T9	29	G10q	0.380	61	9,000	12
	FC6T9/WW · RS	20	Warm White	3,000	-	900	6 1/2	165	T9	29	G10q	0.380	53	9,000	12
	FC8T9/D · RS	22	Daylight	6,500	-	1,150	8 1/4	210	T9	29	G10q	0.370	74	9,000	12
	FC8T9/CW · RS	22	Cool White	4,200	-	1,300	8 1/4	210	T9	29	G10q	0.370	61	9,000	12
	FC8T9/WW · RS	22	Warm White	3,000	-	1,300	8 1/4	210	T9	29	G10q	0.370	53	9,000	12
	FC12T9/D · RS	32	Daylight	6,500	-	1,800	12	304	T9	29	G10q	0.430	74	9,000	12
	FC12T9/CW · RS	32	Cool White	4,200	-	2,000	12	304	T9	29	G10q	0.430	61	9,000	12
	FC12T9/WW · RS	32	Warm White	3,000	-	2,000	12	304	T9	29	G10q	0.430	53	9,000	12
	FC16T10/D · RS	40	Daylight	6,500	-	2,500	16	406	T9	29	G10q	0.420	74	9,000	12
	FC16T10/CW · RS	40	Cool White	4,200	-	2,800	16	406	T9	29	G10q	0.420	61	9,000	12
	FC16T10/WW · RS	40	Warm White	3,000	-	2,800	16	406	T9	29	G10q	0.420	53	9,000	12

(Note) Lumens indicate the value after 100 hours of use.

For Sign Boards

Illuminates the words on the signboards brilliantly and attracts shopper's attention.

SPECIAL LAMPS

<Special Feature>

- The color temperature of this lamp is 7,500K and that of the light passing through the milky white acrylic plate of the signboard come out as 6,700K, so that the light of this lamp looks sharper and clearer white than that of Cool White and Daylight.
- Triphosphor is applied, so that the light colors on the signboard such as blue, green, red, etc. are illuminated beautifully and brilliantly. In addition, the color looks more clear and beautiful in contrast to the white background of the signboard.
- This lamp is also suitable for illuminating aquariums.

<Applications>

- Signboards
- Aquarium



Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Initial Lumens (lm)	Dimensions					Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)
						Length		Bulb Type	Tube Diameter (mm)	Base				
						in	mm							
Preheat Start Type	F15T8 / EX-75	15	Tropical Daylight	7,500	800	18	436	T8	25.5	G13	0.300	88	6,000	25
	F20T10 / EX-75	20		7,500	1,250	24	589	T10	32	G13	0.350	88	8,500	25
	F40T10 / EX-75	37		7,500	3,150	48	1,198	T10	32	G13	0.410	88	12,000	25

Triphosphor Clean Lamps

This is a triphosphor fluorescent lamp coated with optical catalyst film of titanium oxide to assist in cleaning the surrounding air of the lamp.

SPECIAL LAMPS

<Special Feature>

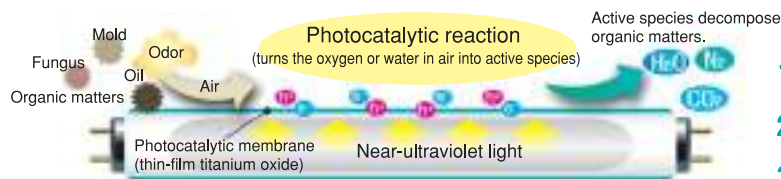
- This lamp has a function to break down bacteria, smells and oil stains on the surface of the lamp and to help cleaning the air near the lamp and to protect from decrease of Lumens of the lamp derived from the stain.
- This is also a triphosphor fluorescent lamp which is superior in brightness and color rendering property to ordinary fluorescent lamps.

<Applications>

- Suitable for hospitals, restaurants, dining rooms, kitchens, food shops, and offices requiring sanitary environment.

What is the fluorescent lamp with a photocatalytic membrane?

It is a fluorescent lamp with a photocatalytic membrane for decomposing organic substances formed on its surface. Photocatalyst is the material that is activated when absorbing light energy. It decomposes organic substances such as fungus or mold, odor molecules or oil content into water, carbon dioxide or nitrogen. (There is no effect on inorganic substances.)



- 1 Odor components or organic matters, such as mold, come in contact with the lamp surface.
- 2 Photocatalytic reaction decomposes such matters into water, carbon dioxide or nitrogen.
- 3 It helps to clean air.

Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Initial Lumens (lm)	Dimensions					Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)
						Length		Bulb Type	Tube Diameter (mm)	Base				
						in	mm							
Preheat Start Type	FL40SS • EX-N / 37-PC	37	Triphosphor N	5,000	3,460	48	1,198	T9	28	G13	0.410	84	12,000	25
Rapid Start Type	FLR40S • EX-N / M / 36-PC	36		5,000	3,350	48	1,198	T10	32	G13	0.440	84	12,000	25
	FLR40S • EX-N / M-PC	40		5,000	3,350	48	1,198	T10	32	G13	0.420	84	12,000	25
HF Type	FHF32 • EX-N-PC	32		5,000	3,100	48	1,198	T8	25.5	G13	0.255	84	12,000	25

Fresh Food Illumination

This lamp is suitable for illuminating fresh foods like meat, fresh fish, fruit and vegetables.



<Special Feature>

- This is a 4 bands fluorescent lamp, adding deep red color light (660nm) to that of 5,000K(EXN) color.
- This light makes red color object such as meat, tuna, look lively.
- As the color temperature 5,000K, the fresh food looks natural.



Type	Ordering Code	Watts (W)	Color Temp. (K)	Initial Lumens (lm)	Dimensions				Lamp Current (A)	Average Life (hours)	Std.Pkg Qty (inner)
					Length		Tube Diameter (mm)	Base			
					in	mm					
Preheat Start Type	FL10.FM	10	5,000	350	13	330	25.5	G13	0.230	6,000	25
	FL15.FM	15	5,000	620	18	436	25.5	G13	0.300	6,000	25
	FL20S.FM	20	5,000	930	24	580	32.0	G13	0.360	8,500	25
	FL32S.FM	32	5,000	1,550	33	830	32.0	G13	0.435	12,000	25
	FL40S.FM	40	5,000	2,300	48	1,198	32.0	G13	0.420	12,000	25

Aquarium Lamps

Suitable for illuminating aquariums and ornamental plants and for growing plants. Available with ordinary lighting fixtures.



<Special Feature>

- This fluorescent lamp is suitable for making the object look vivid because the light contains the luminous components of blue and red in abundance.
- Since the lamp emits light that promote carbon dioxide assimilation of green plants, it can be used for stimulating to grow plants.
(By adjusting the lighting period, the flowering time of plants can be freely controlled.)
- This lamp can be used with ordinary lighting fixtures.

<Applications>

- Aquariums for tropical fish and goldfish
- Illumination for ornamental plants
- Growing plants; controlling flowering time



Type	Ordering Code	Watts (W)	Initial Lumens (lm)	Dimensions					Lamp Current (A)	Average Life (hours)	Std.Pkg Qty (inner)
				Length		Bulb Type	Tube Diameter (mm)	Base			
				in	mm						
Preheat Start Type	F10T8 / BR	10	180	13	330	T8	25.5	G13	0.230	6,000	25
	F15T8 / BR	15	280	18	436	T8	25.5	G13	0.300	6,000	25
	F20T10 / BR	20	370	24	589	T10	32	G13	0.360	8,500	25
	F30T9 / BR	30	700	38	983	T9	29	G13	0.370	8,500	25
	F40T10 / BR	40	960	48	1,198	T10	32	G13	0.420	12,000	25

(Note) The initial lumens indicate the value after 100 hours of use.

Blacklight (BL) Lamps

Lamp attracting insects.

SPECIAL LAMPS

<Special Feature>

●The special phosphor of this lamp emits ultraviolet rays (maximum wavelength: 369 nm) to attract insects.

<Applications>

●Light source for an insect killer (device to kill insects by electrical shock) For photochemical reaction

<Directions for use>

●Wear glasses to protect your eyes from damage when looking at the lamp a long time.



Type	Ordering Code	Watts (W)	UV Output (W)	Dimensions					Lamp Current (A)	Average Life (hours)	Std.Pkg Qty (inner)
				Length		Bulb Type	Tube Diameter (mm)	Base			
				in	mm						
Preheat Start Type	F4T5 / BL	4	0.35	6	135	T5	15.5	G5	0.170	3,000	50
	F6T5 / BL	5	0.8	9	211	T5	15.5	G5	0.160	3,000	50
	F8T5 / BL	8	1.2	12	287	T5	15.5	G5	0.145	3,000	50
	F10T8 / BL	10	1.5	13	330	T8	25.5	G13	0.230	5,000	25
	F15T8 / BL	15	2.5	18	436	T8	25.5	G13	0.300	5,000	25
	FL20SBL	20	4.0	24	580	T10	32	G13	0.360	7,500	25
	F20T9 / BL	18	4.0	24	589	T9	28	G13	0.360	7,500	25
	F30T9 / BL	30	5.5	36	893	T9	28	G13	0.370	7,500	25
	F40T10 / BL	40	7.5	48	1,198	T10	32	G13	0.420	7,500	25
FC8T9 / BL	22	3.4	8 1/4	210	T9	29	G10q	0.370	4,000	24	

Blacklight blue (BL-B) Lamps

Emits only ultraviolet rays; widely used at discos.

SPECIAL LAMPS

<Special Feature>

●Since it uses a special colored tube that shuts off visible rays, only ultraviolet rays (maximum wavelength: 352 nm) are emitted.

<Applications>

●Illumination for stages, signboards and fluorescent decorations at discos. Identification of documents, jewels, etc. Search for stains on clothes.

<Directions for use>

Wear glasses to protect your eyes from damage when working near the lamp for a long time.



Type	Ordering Code	Watts (W)	UV Output (W)	Dimensions					Lamp Current (A)	Average Life (hours)	Std.Pkg Qty (inner)
				Length		Bulb Type	Tube Diameter (mm)	Base			
				in	mm						
Preheat Start Type	FL4BL-B	4	0.25	6	135	T5	15.5	G5	0.170	3,000	50
	FL6BL-B	6	0.6	9	211	T5	15.5	G5	0.160	3,000	50
	FL8BL-B	8	1.0	12	287	T5	15.5	G5	0.145	3,000	50
	FL10BL-B	10	1.2	13	330	T8	25.5	G13	0.230	4,000	50
	FL15BL-B	15	2.0	18	436	T8	25.5	G13	0.300	4,000	20
	FL20T10 / BL-B	20	3.0	24	589	T10	32	G13	0.360	4,000	10
	FL40SBL-B	40	7.4	48	1,198	T10	32	G13	0.420	5,000	10

Germicidal Lamps

Emits ultraviolet rays to sterilize air, water and apparatuses.

SPECIAL LAMPS

<Special Feature>

- Since the special glass used for this lamp transmits germicidal rays (253.7nm), the light of this lamp sterilizes air, water and apparatuses.
- This lamp may emit very little offensive odor, unlike conventional germicidal lamps.
- Thanks to the special electrode structure, the appearance of spattering (blackening) due to electric discharge is less and the high efficiency is achieved.

<Applications>

- Sterilization of air, water and apparatuses.



Type	Ordering Code	Watts (W)	UV Output (W)	Dimensions					Lamp Current (A)	Average Life (hours)	Std.Pkg Qty (inner)
				Length		Bulb Type	Tube Diameter (mm)	Base			
				in	mm						
Preheat Start Type	GL4	4	0.5	6	135	T5	15.5	G5	0.162	3,000	10
	GL6	6	1.0	9	211	T5	15.5	G5	0.147	3,000	10
	GL8	8	1.6	12	287	T5	15.5	G5	0.170	3,000	10
	GL10	10	1.8	13	330	T8	25.5	G13	0.230	4,000	10
	GL15	15	3.2	18	436	T8	25.5	G13	0.300	4,000	10

(Note)

1. The ultraviolet rays of germicidal lamps damage your eyes. Please do not look at the lamps directly.
2. Do not expose your skin to the ultraviolet rays of the lamp for a long time; otherwise, your skin will be tanned.

Yellow Fluorescent Lamps

Suitable for illumination in a semiconductor factory handling light sensitive materials.

SPECIAL LAMPS

<Special Feature>

- Emits little light below 500 nm, making it suitable for places handling light sensitive materials.
- Emits yellow light that can also be used for avoiding insects.

<Applications>

Places that handle light sensitive materials such as;

- Semiconductor factories
- Clean room of IC factories
- For avoiding insects
- Orchards
- Food factories
- Cattle sheds



Type	Ordering Code	Watts (W)	Color Description	Initial Lumens (lm)	Dimensions					Lamp Current (A)	Average Life (hours)	Std.Pkg Qty (inner)
					Length		Bulb Type	Tube Diameter (mm)	Base			
					in	mm						
Preheat Start Type	FL20S • Y-F	20	Yellow	980	24	580	T10	32	G13	0.360	7,500	25
	F20T10 / Y-F	20		980	24	580	T10	32	G13	0.380	7,500	25
	FL40S • Y-F	40		2,450	48	1.198	T10	32	G13	0.420	10,000	25
Rapid Type	FLR40S • Y-F / M	40		2,450	48	1.198	T10	32	G13	0.420	10,000	25

(Note) The initial lumen indicates the value after 100-hours use

Highest Color Rendering Fluorescent Lamps

Color rendition
AAA
for
color evaluation

**Satisfies the high color rendition AAA class specified by JIS standard.
Best suited for printing houses, photography shops.**

SPECIAL LAMPS

<Special Feature>

- The lamp uses a new type of high color rendering phosphor for the highest color rendition. The average color rendering index (Ra) is 99 with a color temperature of 5,000K.
- This lamp emits natural light and reproduces all colors ranging from red to blue property.
- This provide the highest color rendition of all fluorescent lamps.
- The lamp cuts ultraviolet rays which cause discoloration of the objects.

<Applications>

- Color inspection of printed material ● Photography shops ● Museums, art galleries
- Showcases that display high-grade articles ● Draper's shops
- Picture galleries, art shops ● Consultation rooms at hospitals



Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Initial Lumens (lm)	Dimensions					Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)
						Length		Bulb Type	Tube Diameter (mm)	Base				
						in	mm							
Preheat Start Type	F20T10 / N-EDL-NU	20	Color Rendition AAA Day White	5,000	920	24	589	T10	32	G13	0.360	99	7,500	25
	FL40S · N-EDL-NU	40		5,000	2,370	48	1,198	T10	32	G13	0.420	99	10,000	25

Shatter Proof Lamps

Even if this lamp is damaged, the broken pieces of glass will scarcely scatter; ideal for safety lighting.

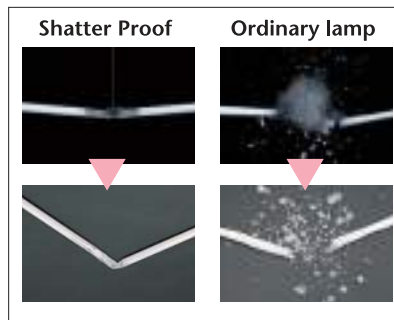
SPECIAL LAMPS

<Special Feature>

- The glass tube is covered with a synthetic resin film (polyester tube) so that even if the lamp is damaged by an external shock, the broken glass pieces and the phosphor hardly scatter.
- Since the synthetic resin film has excellent light permeability, it has no bad influence on the brightness of the lamp.

<Applications>

- Schools ● Food factories
- Lighting inside vehicles (Locations where the lamp may be damaged by external shock and where a person may be injured case the lamp is broken.)



Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Initial Lumens (lm)	Dimensions					Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)
						Length		Bulb Type	Tube Diameter (mm)	Base				
						in	mm							
Preheat Start Type	F20T9 / D · P	18	Daylight	6,500	1,080	24	589	T9	28	G13	0.350	74	8,500	25
	F20T9 / CW · P	18	Cool White	4,200	1,230	24	589	T9	28	G13	0.350	61	8,500	25
	F40SS · D / 37-P	37	Daylight	6,500	2,700	48	1,198	T9	28	G13	0.410	74	12,000	25
	F40SS · W / 37-P	37	Cool White	4,200	3,100	48	1,198	T9	28	G13	0.410	61	12,000	25
Rpid Start Type	FLR40S · D / M-P	40	Daylight	6,500	2,610	48	1,198	T10	32	G13	0.420	74	12,000	25
	FLR40S · W / M-P	40	Cool White	4,200	3,000	48	1,198	T10	32	G13	0.420	61	12,000	25

Colored Fluorescent Lamps

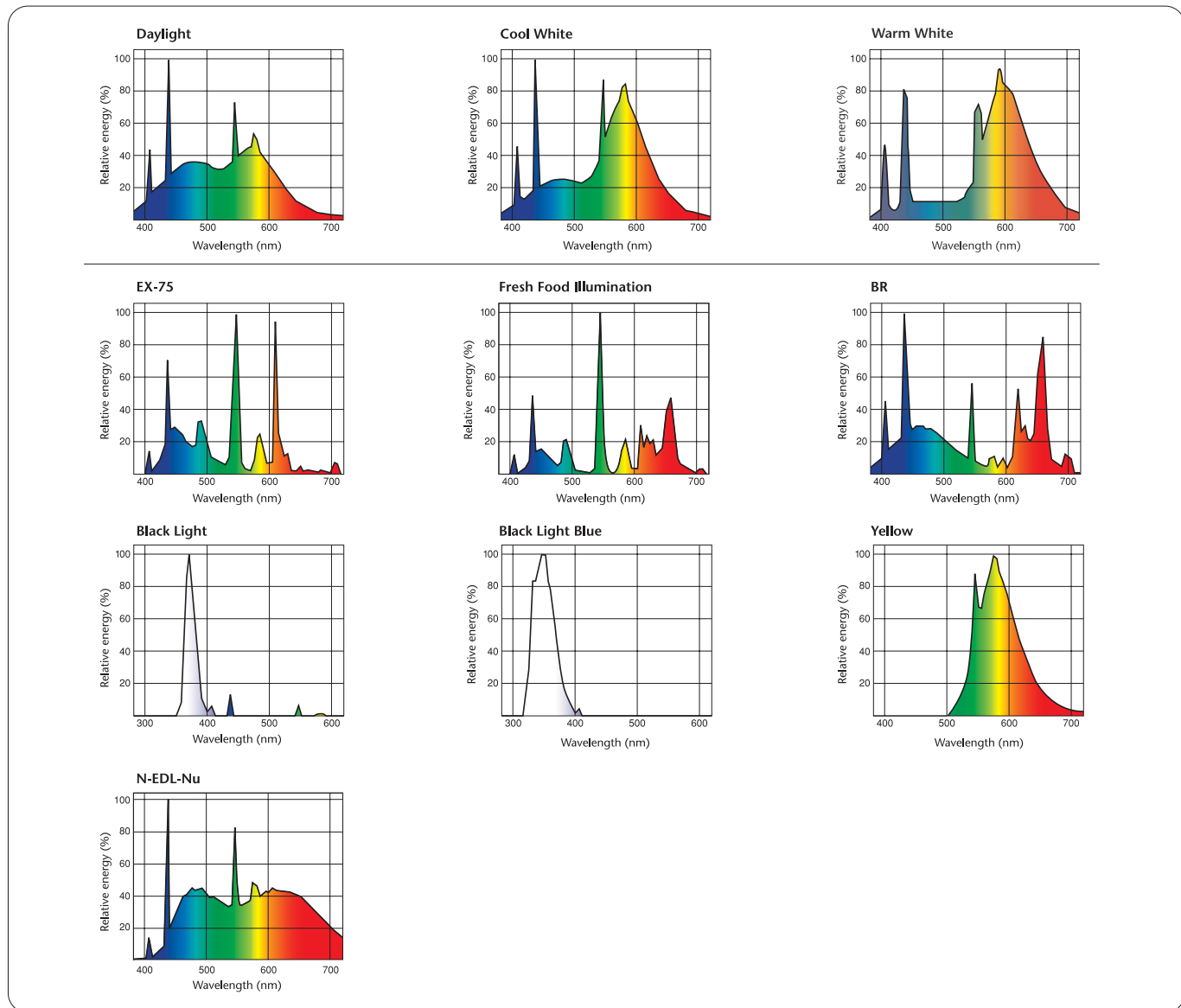
These lamps are applicable for decorative use at places such as commercial establishments, show windows etc.



The colored fluorescent lamp is coated with monochromatic phosphor. We have 4 kinds of fluorescent color; red, blue, green and yellow.

Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	(mm)	Dimensions					Lamp Current (A)	Std.Pkg Qty (inner)
						Length		Watts (W)	Tube Diameter (mm)	Base		
						in	mm					
Preheat Start Type	F20T8 / R	18	Red	2,300	620	24	589	T8	25.5	G13	0.37	25
	F20T8 / B	18	Blue	25,000	435	24	589	T8	25.5	G13	0.37	25
	F20T8 / G	18	Green	6,700	544	24	589	T8	25.5	G13	0.37	25
	F20T8 / Y	18	Yellow	2,500	545	24	589	T8	25.5	G13	0.37	25
	F40T8 / R	36	Red	2,300	620	48	1,198	T8	25.5	G13	0.43	25
	F40T8 / B	36	Blue	25,000	435	48	1,198	T8	25.5	G13	0.43	25
	F40T8 / G	36	Green	6,700	544	48	1,198	T8	25.5	G13	0.43	25
	F40T8 / Y	36	Yellow	2,500	545	48	1,198	T8	25.5	G13	0.43	25

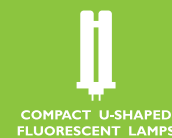
Spectral energy distribution



Triphosphor

Compact U-shaped Fluorescent Lamps (PARA-LIGHT-2 PINS)

New Type of fluorescent lamps much more compact than conventional straight or circular ones.



<Special Feature>

●The length is 1/3 to 1/5 of the conventional straight fluorescent lamps. Along with the miniaturization of light fittings, fluorescent lamps also become smaller, thus a wide variety of light fittings can be used for smaller lighting space.

<Applications>

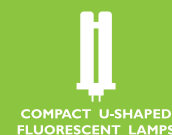
●Desk lamps, porch lights, bracket lights and down lights.



Triphosphor

Compact U-shaped Fluorescent Lamps (PARA-LIGHT-4 PINS)

New type of fluorescent lamps that are much smaller than ordinary straight or circular lamps.



<Special Feature>

●For example, <PARA-LIGHT> 18W is 1/3 as long as the straight fluorescent lamp 20W. <PARA-LIGHT2> and <PARA-LIGHT FLAT> 18W are 1/5 as long as the straight fluorescent lamp. Due to miniaturisation of the lamps, the size of the lighting fixtures is made much smaller than that of conventional fixtures. As a result, a wide variety of lighting fixtures has become available even for a small space.

When compared with incandescent bulbs, the power consumption and heat generation are reduced to 1/3 or to 1/4 and the life is increased by 3 to 6 times.

Triphosphor colors, or Day White, Warm White and Daylight are available for <PARA-LIGHT>, <PARA-LIGHT2> and <PARA-LIGHT FLAT>.

<Applications>

●These innovative lamps can be used for desk lamps, porch lights, bracket lights, down lights and hundreds of other applications where the would be a critical factor.



PARA-LIGHT-2 PINS

Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Initial Lumens (lm)	Dimensions			Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)	
						Length (mm)	Tube Diameter (mm)	Base					
Triphosphor													
Para-Light	FDX10/D	10	Daylight	6,500	865	560	119	12	G24d-1	0.190	80	8,000	20
	FDX10/WW	10	Warm White	2,700	827	600	119	12	G24d-1	0.190	82	8,000	20
	FDX13/D	13	Daylight	6,500	865	840	141	12	G24d-1	0.175	80	8,000	20
	FDX13/CW	13	Cool White	4,000	840	840	141	12	G24d-1	0.175	80	8,000	20
	FDX13/WW	13	Warm White	2,700	827	900	141	12	G24d-1	0.175	82	8,000	20
	FDX18/D	18	Daylight	6,500	865	1,120	153	12	G24d-2	0.220	80	8,000	20
	FDX18/CW	18	Cool White	4,000	840	1,120	153	12	G24d-2	0.220	80	8,000	20
	FDX18/WW	18	Warm White	2,700	827	1,200	153	12	G24d-2	0.220	82	8,000	20
	FDX26/D	26	Daylight	6,500	865	1,580	174	12	G24d-3	0.325	80	8,000	20
FDX26/CW	26	Cool White	4,000	840	1,700	174	12	G24d-3	0.325	82	8,000	20	
FDX26/WW	26	Warm White	2,700	827	1,700	174	12	G24d-3	0.325	82	8,000	20	

PARA-LIGHT-4 PINS

Type	Ordering Code	Watts (W)	Color Description	Color Temp. (K)	Initial Lumens (lm)	Dimensions			Lamp Current (A)	Color Rendering Index (Ra)	Average Life (hours)	Std.Pkg Qty (inner)			
						Length		Bulb Type					Tube Diameter (mm)	Base	
						In	mm								
Triphosphor															
Para-Light	FPL9EX-D	9	EX-D	6,700	867	510	5 3/8	135	FL-10	15.5	GX10q-1	0.230	84	6,000	10
	FPL9EX-N	9	EX-N	5,000	850	540	5 3/8	135	FL-10	15.5	GX10q-1	0.230	84	6,000	10
	FPL9EX-L	9	EX-L	3,000	830	540	5 3/8	135	FL-10	15.5	GX10q-1	0.230	84	6,000	10
	FPL13EX-D	13	EX-D	6,700	867	790	7	180	FL-15	15.5	GX10q-2	0.300	84	6,000	10
	FPL13EX-N	13	EX-N	5,000	850	840	7	180	FL-15	15.5	GX10q-2	0.300	84	6,000	10
	FPL13EX-L	13	EX-L	3,000	830	840	7	180	FL-15	15.5	GX10q-2	0.300	84	6,000	10
	FPL18EX-D	18	EX-D	6,700	867	1,050	8 1/2	221	FL-20	20	GY10q-3	0.375	84	7,500	10
	FPL18EX-N	18	EX-N	5,000	850	1,120	8 1/2	221	FL-20	20	GY10q-3	0.375	84	7,500	10
	FPL18EX-L	18	EX-L	3,000	830	1,120	8 1/2	221	FL-20	20	GY10q-3	0.375	84	7,500	10
	FPL27EX-D	27	EX-D	6,700	867	1,690	9 3/4	246	FL-30	20	GY10q-4	0.610	84	7,500	10
	FPL27EX-N	27	EX-N	5,000	850	1,800	9 3/4	246	FL-30	20	GY10q-4	0.610	84	7,500	10
	FPL27EX-L	27	EX-L	3,000	830	1,800	9 3/4	246	FL-30	20	GY10q-4	0.610	84	7,500	10
	FPL28EX-D	28	EX-D	6,700	867	1,970	12 5/8	324	FL-32	20	GY10q-5	0.425	84	7,500	10
	FPL28EX-N	28	EX-N	5,000	850	2,100	12 5/8	324	FL-32	20	GY10q-5	0.425	84	7,500	10
	FPL28EX-L	28	EX-L	3,000	830	2,100	12 5/8	324	FL-32	20	GY10q-5	0.425	84	7,500	10
	FPL36EX-D	36	EX-D	6,700	867	2,720	16 1/8	411	FL-40	20	GY10q-6	0.435	84	9,000	10
	FPL36EX-N	36	EX-N	5,000	850	2,900	16 1/8	411	FL-40	20	GY10q-6	0.435	84	9,000	10
	FPL36EX-L	36	EX-L	3,000	830	2,900	16 1/8	411	FL-40	20	GY10q-6	0.435	84	9,000	10
	FPL55EX-D	55	EX-D	6,700	867	4,230	22	559	FL-65	20	GY10q-7	0.670	84	9,000	10
	FPL55EX-N	55	EX-N	5,000	850	4,500	22	559	FL-65	20	GY10q-7	0.670	84	9,000	10
FPL55EX-L	55	EX-L	3,000	830	4,500	22	559	FL-65	20	GY10q-7	0.670	84	9,000	10	
Para-Light2	FDL13EX-D	13	EX-D	6,700	867	750	4 1/2	116	FL-15	16.5	GX10q-2	0.300	84	6,000	10
	FDL13EX-N	13	EX-N	5,000	850	800	4 1/2	116	FL-15	16.5	GX10q-2	0.300	84	6,000	10
	FDL13EX-L	13	EX-L	3,000	830	800	4 1/2	116	FL-15	16.5	GX10q-2	0.300	84	6,000	10
	FDL18EX-D	18	EX-D	6,700	867	1,000	5	127	FL-20	16.5	GX10q-3	0.375	84	6,000	10
	FDL18EX-N	18	EX-N	5,000	850	1,070	5	127	FL-20	16.5	GX10q-3	0.375	84	6,000	10
	FDL18EX-L	18	EX-L	3,000	830	1,070	5	127	FL-20	16.5	GX10q-3	0.375	84	6,000	10
	FDL27EX-D	27	EX-D	6,700	867	1,450	5 5/8	138	FL-30	16.5	GX10q-4	0.610	84	6,000	10
	FDL27EX-N	27	EX-N	5,000	850	1,550	5 5/8	138	FL-30	16.5	GX10q-4	0.610	84	6,000	10
FDL27EX-L	27	EX-L	3,000	830	1,550	5 5/8	138	FL-30	16.5	GX10q-4	0.610	84	6,000	10	
Para-Light Flat	FML13EX-D	13	EX-D	6,700	867	770	4 1/2	116	FL-15	16.5	GX10q-2	0.300	84	6,000	10
	FML13EX-L	13	EX-L	3,000	830	850	4 1/2	116	FL-15	16.5	GX10q-2	0.300	84	6,000	10
	FML13EX-N	13	EX-N	5,000	850	850	4 1/2	116	FL-15	16.5	GX10q-2	0.300	84	6,000	10
	FML18EX-D	18	EX-D	6,700	867	1,030	5	127	FL-20	16.5	GX10q-3	0.375	84	6,000	10
	FML18EX-N	18	EX-N	5,000	850	1,100	5	127	FL-20	16.5	GX10q-3	0.375	84	6,000	10
	FML18EX-L	18	EX-L	3,000	830	1,100	5	127	FL-20	16.5	GX10q-3	0.375	84	6,000	10
	FML27EX-D	27	EX-D	6,700	867	1,480	5 5/8	138	FL-30	16.5	GX10q-4	0.610	84	6,000	10
FML27EX-N	27	EX-N	5,000	850	1,600	5 5/8	138	FL-30	16.5	GX10q-4	0.610	84	6,000	10	
FML27EX-L	27	EX-L	3,000	830	1,600	5 5/8	138	FL-30	16.5	GX10q-4	0.610	84	6,000	10	
HF Para-Light	FHP32EN	32	EX-N	5,000	850	2,900	16.2	411	Special	17.5	GY10q-9	0.255	84	12,000	10
	FHP32EWW	32	EX-W	3,500	835	2,900	16.2	411	Special	17.5	GY10q-9	0.255	84	12,000	10
	FHP45EN	45	EX-N	5,000	850	4,350	22	559	Special	17.5	GY10q-10	0.325	84	12,000	10
	FHP45EWW	45	EX-W	3,500	835	4,350	22	559	Special	17.5	GY10q-10	0.325	84	12,000	10

(Note)

1. An exclusive apparatus for<PARA-LIGHT> series should be applied. A lamp wattage designated for application fixture should be used. The lamps cannot be used with a rapid start ballast. Improper combination may cause no fitting to socket no flashing of lamp, short life or overheating of the apparatus.
2. Lighting at a low temperature may take time to lighting on and cause flickering. The ambient temperature of 5°C to 40°C is recommended.
3. The initial characteristics indicate the values after 100 hours of use at ambient temperature of 25°C using a ballast for test in downlight (on the base).
4. Refrain from using lamps in a place splashed with rainfall of water-drop because it may break.
5. Lamp should not be touched when lit or just after turning-off the light because of high temperature on the lamp. Replacing and cleaning of the lamp should be conducted after cooling of the lamp temperature through turning-off the power source switch.

Triphosphor
Spiral Lamps



Hitach features advanced new technology at CFL field.

<Special Feature>

● **Reduces Electricity costs and Heat Generation to 1/5 than an Incandescent Bulb**

Compared with an incandescent bulb, electricity costs and heat generation are 1/5, making COMPACT FLUORESCENT LAMPS perfect for use over an extended period of time, or in a fixture requiring many bulbs.

● **Light Up Instantly and Light in weight!**

By built-in electronic inverter, it lights up instantly without flickering. In spite of that, it's really light in weight. What's more, it is light weight.

● **Long Life: 6,000 hours**

The life is 6 times longer than that of an incandescent lamp. With 4 hours of use per day, CFL will last up to 6 years. These are ideal for lighting applications requiring many bulbs.

● **Bright and Vivid Due to Triphosphor Coating**

The triphosphor fluorescent lamp illuminates every object making look more vivid and natural.



T2/T3 Type



2U Lamps



3U Lamps



4U Lamps



Globe Type

Type	Ordering Code	Wattage (W)	Voltage (V)	Lamp Color	Overall Length (mm)	Dimensions			Initial Lumen (lm)	Average Life
						Outer Dia (mm)	Tube Dia (mm)	Base		
T2	EFS5E/T2	8	220/240	D, WW	83	45	7.5	E14,E27,B22	310	8,000
	EFS8E/T2	8	220/240	D, WW	88	45	7.5	E14,E27,B22	530	8,000
	EFS11E/T2	11	220/240	D, WW	95	45	7.5	E14,E27,B22	700	8,000
	EFS14E/T2	14	220/240	D, WW	101	45	7.5	E14,E27,B22	900	8,000
T3	EFS11E	11	220/240	D, WW	116	50	9.3	E14,E27	650	6,000
	EFS15E	15	220/240	D, WW	127	50	9.3	E14,E27	840	6,000
	EFS20E	20	220/240	D, WW	140	62	12.0	E27	1,050	6,000
	EFS23E	23	220/240	D, WW	156	60	12.0	E27,B22	1,350	6,000
	EFS23S	23	110/130	D, WW	156	60	12.0	E27	1,350	6,000
	EFS25E	25	220/240	D, WW	156	62	12.0	E27,B22	1,460	6,000
T4	EFS30E	30	220/240	D, WW	170	60	12.0	E27,B22	1,815	6,000
2U	EFD9E	9	220/240	D, WW	140	41	12.0	E27,B22	450	6,000
	EFD11E	11	220/240	D, WW	155	41	12.0	E27,B22	550	6,000
	EFD15E	15	220/240	D, WW	170	41	12.0	E27,B22	810	6,000
3U	EFH8E	8	220/240	D, WW	113	41	9.3	E14,E27,B22	440	6,000
	EFH11E	11	220/240	D, WW	123	41	9.3	E14,E27,B22	605	6,000
	EFH14E	14	220/240	D, WW	134	41	9.3	E14,E27,B22	740	6,000
	EFH14S	14	110/130	D, WW	134	41	9.3	E14,E27	740	6,000
	EFH20E	20	220/240	D, WW	165	49	12.0	E27,B22	1,120	6,000
	EFH20S	20	110/130	D, WW	165	49	12.0	E27	1,120	6,000
	EFH23E	23	220/240	D, WW	178	49	12.0	E27,B22	1,350	6,000
	EFH23S	23	110/130	D, WW	178	49	12.0	E27	1,350	6,000
4U	EFO45E	45	220/240	D, WW	213	80	16.8	E27	2,500	6,000
Globe	EFG15E [※]	15	220/240	D, WW	136	86	—	E27	750	6,000
	EFG20E	20	220/240	D, WW	156	110	—	E27	1,000	6,000

※ under consideration.

Incandescent Lamps

Standard incandescent lamps are used for a wide range of general lighting applications.



<Special Feature>

●A colour rendering index is 100, and colour temperature is 2,800k. It includes a universal burning position, and a point light source. It is compact and easy to apply to many kinds of fixtures. Two kinds of bulb finish are available in silica coated and Clear type finishes. Plus two kinds of base E27 and B22 bases.

<Applications>

●The Silica coated type curbs brilliance and sparkle, and are applicable for ordinary households, stores, stores, hotels, etc. The Clear type has a clear outer glass and emits brilliance that is applicable for chandeliers, brackets, pendants etc.



Type	Wattage (W)	Ordering Code	Bulb Finish	Applied Voltage (V)	Dimensions			Luminous Flux(220V) (V)	Luminous Flux(230V) (lm)	Life at 220V (Hours)	Life at 230V (Hours)
					Dia. (mm)	Length (mm)	Base				
SILICA COATED TYPE	25	IL25E27 / F-E	Silica	220 / 230	60	100	E27,B22	220	230	1,500	1,000
	40	IL40E27 / F-E	Silica	220 / 230	60	100	E27,B22	350	360	1,500	1,000
	60	IL60E27 / F-E	Silica	220 / 230	60	100	E27,B22	630	650	1,500	1,000
	100	IL100E27 / F-E	Silica	220 / 230	60	100	E27,B22	1,250	1,300	1,500	1,000
	25	IL25B22 / F-E	Silica	220 / 230	60	100	E27,B22	220	220	1,500	1,000
	40	IL40B22 / F-E	Silica	220 / 230	60	100	E27,B22	350	350	1,500	1,000
	60	IL60B22 / F-E	Silica	220 / 230	60	100	E27,B22	630	630	1,500	1,000
CLEAR TYPE	25	IL25E27 / C-E	Clear	220 / 230	60	106	E27,B22	220	230	1,500	1,000
	40	IL40E27 / C-E	Clear	220 / 230	60	106	E27,B22	350	350	1,500	1,000
	60	IL60E27 / C-E	Clear	220 / 230	60	106	E27,B22	630	630	1,500	1,000
	100	IL100E27 / C-E	Clear	220 / 230	60	106	E27,B22	1,250	1,300	1,500	1,000
	25	IL25B22 / C-E	Clear	220 / 230	60	106	E27,B22	220	230	1,500	1,000
	40	IL40B22 / C-E	Clear	220 / 230	60	106	E27,B22	350	360	1,500	1,000
	60	IL60B22 / C-E	Clear	220 / 230	60	106	E27,B22	630	650	1,500	1,000
	100	IL100B22 / C-E	Clear	220 / 230	60	106	E27,B22	1,250	1,300	1,500	1,000

Glow Starter

The Glow Starter is used to ignite preheat start type fluorescent lamps.



By using the bimetal in the starter to preheat lamp cathodes, Glow Starter can automatically start FL lamps. (As it is necessary to preheat the cathodes to start the preheat-start type fluorescent lamps).



Type	Circuit	FL Lamps	Applied Voltage	Dimensions		Operating times
				Length(mm)	Dia.(mm)	
S10	Single	4W-65W	220V-240V	38.8	21.5	Min. 6,000

Phenomena during use of fluorescent lamps

Changes (blackening) that occur in tube appearance during use of fluorescent lamps, Sometimes may and sometimes may not affect the brightness and life.

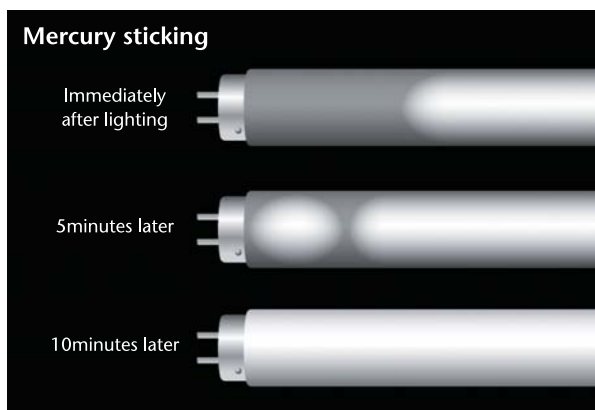
■ Phenomena not related to life

Mercury sticking to tube and (mercury sticking)

When you turn on a new fluorescent lamp, you may be surprised to see a blackish or dark gray area on the wall of the glass tube near the electrode and wonder why it is blackening.

When the electrode suddenly becomes hot, the mercury near the electrode suddenly evaporates, but then turns back to liquid and sticks to the tube wall, which is still cold.

If, however, the lamp stays lit, the tube wall will gradually heat up, and the mercury will evaporate again, disappearing in about 10 minutes.



● Mercury sticking to tube wall (mercury contamination)

After a fluorescent lamp has been used for a very long time, a brownish-gray band-like shading may appear along the length to the lamp.

This happens in case the mercury remains on part of the tube wall that is always cooled while it.

If such a state continues for a long time, the mercury will react with the phosphor and transparent conductive coat (in the case of the rapid start type), producing such shading.

Such a phenomenon tends to occur when a metallic louver is in contact with the lamp or when a cold wind blows through, it has nothing to do with the life of the lamp, so the lamp can be used without trouble.

Hitachi's rapid start type fluorescent lamp can be used without worry since it is seldom subject to this phenomenon.



● Yellow ring band

With a new fluorescent lamp that has only been used for a short time, a yellowish-brown ring or band may appear on the tube wall near the electrode. This may occur either when impurities such as carbon contained in the electron emitter, sticking to the electrode, scatter and

stick to the tube wall, or when gas discharged from the phosphor through burning, combines with the mercury. This phenomenon will not affect the life of the lamp because after a certain volume of impurities has been scattered and discharged, the phenomenon will not progress any further.



■ Blackening and its effect on life

Generally, over course of a lamp's service life, the electron emitter of the fluorescent lamp is consumed and scattered. This emitter material will gradually stick to the tube wall and accumulate there; thus, this blackening occurs on all lamps after extend use, although there are differences be roughly sub-divided into two types. One is a black spot with a relatively clear border, while the other is a blackish gray ring or band (called tube-end blackening) that occurs on the tube wall near the electrode of the lamp. Tube-end blackening is mainly caused by consumption of the electron emitter and tends to occur sooner when the lamp is switched on and off more frequently, or when the voltage and the frequency fluctuate frequently, this causes the lamp current to increase, adversely affecting the life of the lamp. Lamps, therefore, must be used under the proper conditions.



● Blackening due to improper contact

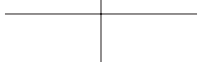
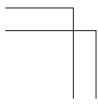
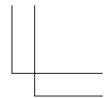
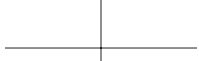
A rapid start type fluorescent lamp may blacken early (and its service life be reduced) if there is poor contact between the base pins and the socket. In this case, the blackening will occur one side only.

Hitachi's fluorescent lamps have been improved for better base pin contact, and this phenomenon will not readily occur, but due care must be taken while installing.



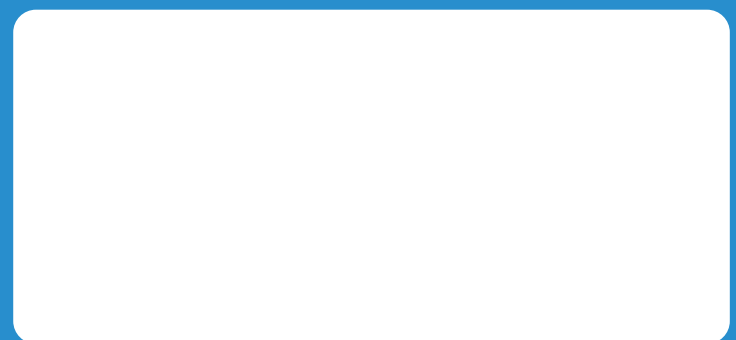
Trouble of lamps and countermeasures

Phenomena	Causes	Countermeasures
The lamps does not go on.	Imperfect contact of the lamp and the socket.	Insert the lamp correctly and confirm the contact.
	Imperfect contact of the glow starter and the glow socket.	Insert the glow starter correctly and confirm the contact.
	Where pull-switch type fixture is used, the button was not pushed properly.	Pull sufficiently (hold it for about 2 seconds) the string of the pull switch and let it go when the ends of the lamp turn bright.
	Where push button switch type fixture is used, the button was not pushed properly.	Press the button sufficiently (for about 2 seconds) and release it when the ends of the lamp turn bright.
	The lamp or the glow starter is defective.	Replace the lamp or the glow starter.
	The supply voltage is too low.	Restore the normal supply voltage (consult with the power company).
	The wiring is disconnected or incorrect.	Correct the wiring.
	The pull switch on push button is defective.	Replace the pull switch or push button.
	A preheat start type lamp is installed in a rapid start type fixture.	Change the lamp to one for the rapid start type.
	The ballast or the lighting fixture is defective.	Replace the ballast or equipment.
	The ambient temperature is too low.	Raise the ambient temperature.
	The power plug is not properly inserted into the power supply outlet.	Repair or replace the plug.
The lamp does not go on but the end is bright.	The life of the lamp has expired.	Replace the lamp.
	The glow starter is defective or the life has expired.	Replace the glow starter.
	The glow socket is defective.	Replace the glow socket.
	Short-circuit of the pull switch contact.	Replace the pull switch.
The lamp repeatedly blinks.	The life of the lamp has expired.	Replace the lamp.
	The glow starter is defective.	Replace the glow starter.
	The voltage is too low.	Replace the normal voltage.
	The wiring connections are imperfect.	Correct the connections.
	The ambient temperature is too low (or the lamp is being exposed to cold wind).	Raise the ambient temperature.
The lamp is slow to light up.	The glow starter is defective.	Replace the glow starter.
	The lamp is defective.	Replace the lamp.
	The supply voltage is too low.	Restore the normal supply voltage (consult with the power company).
	The ambient temperature is too low (or the lamp is being exposed to cold wind).	Raise the ambient temperature.
	The ballast is defective.	Replace the ballast.
The light flickers (snake phenomenon) or twinkles.	Flickering sometimes occurs with a new lamp.	Turn the switch on / off several times.
	The supply voltage is too high or too low.	Restore the normal supply voltage.
	The ballast is defective.	Replace the ballast.
The lamp ends blacken right after the lamp goes on.	The mercury in the lamp adheres to the either end of the tube.	No action is required. The blackening disappears when the lamp is kept burning.
The lamp ends blacken in a short period.	The lamp is switched on/off too frequently.	Avoid too frequent on / off operation.
	The supply voltage is too high or too low.	Restore the normal supply voltage.
	The ambient temperature or the temperature inside the lighting fixture is too high.	Lower the temperature.
	The ballast is defective or incompatible.	Replace the ballast.
	Incorrect wiring in the lighting fixture.	Correct the wiring.
	With the rapid start type, imperfect contact of pins.	Insert the lamp and confirm the contact.
	The lamp is defective.	Replace the lamp.
Radios receive noise interface	The noise eliminating condenser is defective.	Replace the condenser.
	The radio is too close to the lighting fixture.	Move it farther away. Keep the radio at least 2 meters away from the lighting fixture.
	The lamp is defective.	Replace the lamp.
Brightness goes down.	The life of the lamp has expired.	Replace the lamp.
	The supply voltage is too low.	Restore the normal supply voltage.
	The fixture (reflecting plate and cover) is dirty.	Clean the lighting equipment thoroughly.
	The lamp is dirty.	Wipe the security lamp.
The security lamp does not go on.	The security lamp is defective or the life has expired.	Replace the security lamp.
	The security lamp socket is defective.	Correct the contact of the socket or replace it.
	The pull switch is defective.	Replace the pull switch.



HITACHI

Inspire the Next



NOTE : The products descriptions and specifications in this catalog are subject to change without notice.